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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/720,473	11/25/2003	Suntisuk Plooksawasdi	934691.311506	9127
24239	7590	09/26/2007	EXAMINER	
MOORE & VAN ALLEN PLLC			GILBERT, WILLIAM V	
P.O. BOX 13706			ART UNIT	
Research Triangle Park, NC 27709			PAPER NUMBER	
			3635	
			MAIL DATE	
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			09/26/2007	
			PAPER	

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

<b>Office Action Summary</b>	<b>Application No.</b> 10/720,473	<b>Applicant(s)</b> PLOOKSAWASDI, SUNTISUK	
	<b>Examiner</b> William V. Gilbert	<b>Art Unit</b> 3635	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

#### Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

#### Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

#### Disposition of Claims

- 4) ☒ Claim(s) 1-21 is/are pending in the application.
- 4a) Of the above claim(s) 14-21 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

#### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

#### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

#### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

Art Unit: 3635

**DETAILED ACTION**

This is a non-final action. Claims 1-21 are pending. Claims 14-21 have been withdrawn from consideration. Claims 1-13 are examined below.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 1-13** are rejected under 35 U.S.C. 102(b) as being anticipated by Shaw (U.S. Patent No. 4,856,952).

Claim 1: Shaw discloses a threaded deformed reinforcing bar comprising a core (Fig. 8: 1A), at least two series of transverse ribs (2A, 4A: see Figs. 6 and 7) on the core, the ribs aligned and spaced longitudinally along the bar and separated by troughs (3A), each series separated transversely from adjacent series by a gap (thickness of longitudinal rib portion proximate 6A), the ribs are angled and aligned to form a pattern of threads along the bar, and a longitudinally extending rib (proximate 6A) in the gap, each rib interrupted adjacent at

Art Unit: 3635

least one end of the bar (see "A" from attached Fig. 2, below), an internally threaded member may be selectively threaded onto the pattern of threads at one end. The phrase "for use in reinforced concrete" line 1, is a statement of intended use of the claimed invention and must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

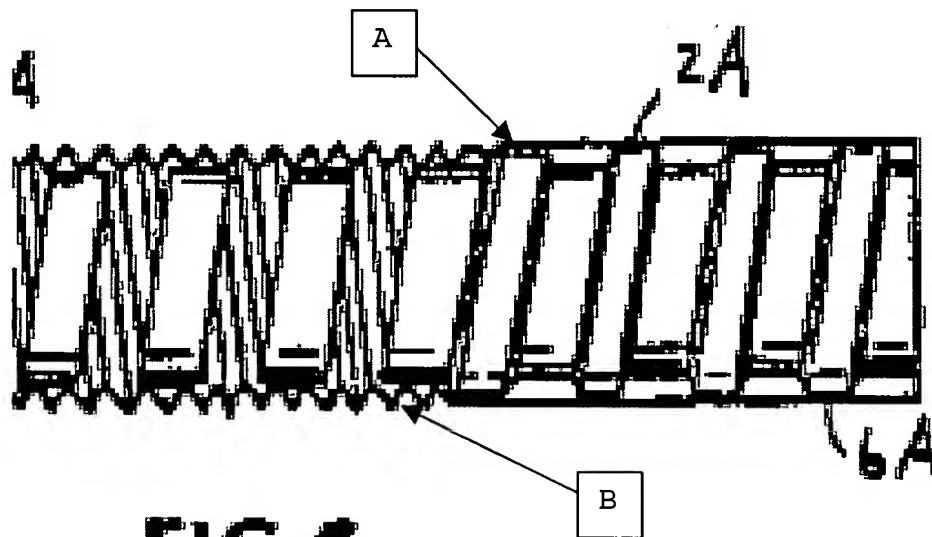


Figure 6 from Shaw

Art Unit: 3635

Claim 2: the core has a circular cross section (Fig. 4, generally).

Claim 3: the transverse ribs and longitudinal ribs are integral with each other.

Claim 4: all the ribs are integral with the core.

Claim 5: the longitudinally extending ribs adjacent at least one end of the bar are interrupted by the absence of the longitudinal ribs in the troughs (see "B" above).

Claim 6: each longitudinally extending rib terminates at a point spaced from said at least one end of the bar (see "A" above).

Claim 7: Applicant should note that only the apparatus, "a bar" is being claimed. The phrase "sheared off", line 1 is a method step and only the final product, the bar, is given patentable weight. The longitudinal member terminates at point "A" noted above.

Claim 8: Applicant should note that only the apparatus, "a bar" is being claimed. The phrase "sheared off", lines 1 and 2 is a method step and only the final product, the bar, is given patentable weight. Parts of the transverse ribs (see "C" from attached Fig. 5, below) are not present adjacent the longitudinal ribs.

Art Unit: 3635

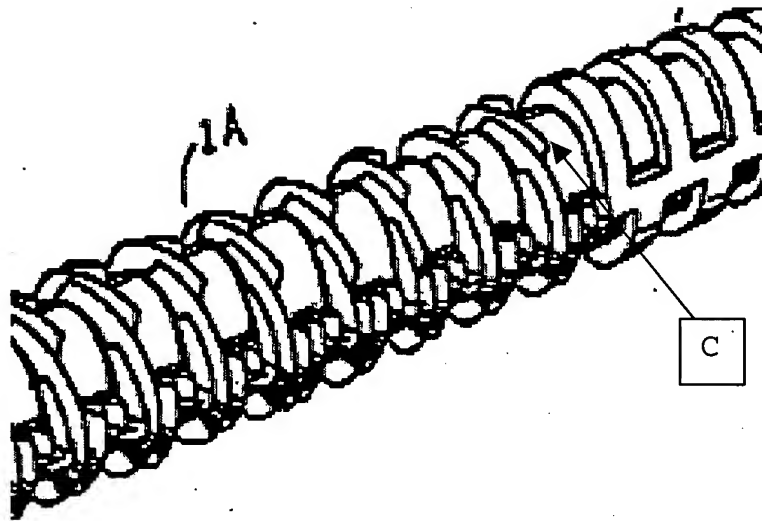


Figure 5 from Shaw

Claim 9: Shaw discloses a threaded deformed reinforcing bar comprising a core (1A) at least one transversely extending rib (2A, 4A) forming a pattern of threads on the bar, at least one longitudinal rib intersecting said transverse rib at multiple areas and interrupting the pattern of threads, and at least a part of the longitudinal rib is absent from a section of the bar at least one end of the bar (see "A" above) where a pattern of threads in the section is unobstructed.

Claim 11: the core has a substantially circular cross-section.

Claim 12: at least one of the transverse ribs includes at least two series of discontinuities (the discontinuities occur

Art Unit: 3635

where the longitudinal rib intersects a transverse rib) extending longitudinally along the bar and wherein one longitudinally extending rib extends along each said series of discontinuities.

Claim 13: the transverse and longitudinally extending ribs are integral with each other and with the core.

***Claim Rejections - 35 USC § 103***

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Art Unit: 3635

**Claim 10** is rejected under 35 U.S.C. 103(a) as being unpatentable over Shaw as applied to claim 9 above, and further in view of Shaw.

Claim 10: the particular species in Shaw discloses the claimed invention except that the transverse rib is a continuous spiral along the bar, however the species in Figure 10 discloses a bar with a transverse rib (4B) that is a continuous spiral. It would have been obvious at the time the invention was made to a person having ordinary skill in the art to substitute the continuous spiral of Figure 10 with the species of Figures 5-7 because the continuous spiral is a functional equivalent and would perform equally as well.

### ***Response to Arguments***

3. The following addresses Applicant's arguments dated 23 July 2007.

Applicant's amendment to the Specification and Figures 1 and 2 overcomes the objection and it is withdrawn (per section I of Applicant's remarks.)



Art Unit: 3635

Applicant's amendment to reverse the order of the claims (per section II of remarks) overcomes the objection and it is withdrawn.

Applicant's amendment to Claim 5 (per section III of remarks) overcomes the 35 U.S.C. §112 rejection and it is withdrawn.

Applicant's arguments, see section IV, filed 23 July 2007, with respect to the rejection(s) of the claim(s) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Shaw.

#### **Conclusion**

4. Any inquiry concerning this communication or earlier communications from the examiner should be directed to William V. Gilbert whose telephone number is 571.272.9055. The examiner can normally be reached on Monday - Friday, 08:00 to 17:00 EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richard Chilcot can be reached on 571.272.6777. The fax phone number for the

Art Unit: 3635

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

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20 Sep 07

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9/20/07